

Application No. 10/574,063
Paper Dated: June 30, 2010
In Reply to USPTO Correspondence of March 2, 2010
Attorney Docket No. 0470-060991

REMARKS

I. Introduction

The Office Action of March 2, 2010 has been reviewed and the Examiner's comments carefully considered. Claims 45-82 are pending in this application. Claims 76-82 were withdrawn in response to the Restriction Requirement issued November 20, 2009. Claims 51-53, 58, 59, 61, 63, and 65-68 have been amended to address the 37 U.S.C. §112 rejections. Independent claims 1 and 71 have been amended to include the limitations of dependent claims 55 and 62, and claims 55 and 62 have been cancelled.

II. Specification

The disclosure is objected to for failure to include a titled section describing the drawings. To address this objection, the specification has been amended to add a "Brief Description of the Drawings". A typographical error in the "Background of the Invention" section of the specification was also corrected.

III. Rejections Under 37 U.S.C. §112

Claims 51-53, 58, 59, 61, 63, and 65-67 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, the Examiner asserts that the term "such as" in these claims is unclear and that the claims are indefinite because they contain both a broad range and narrower ranges falling within that broad range. Claims 51-53, 58, 59, 61, 63, and 65-67 have been amended to delete the narrow ranges recited using "such as". These claims now only recite a single, broad range.

Claim 68 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, the Examiner asserts that the meaning of a "hydrolyzed lactose preparation" is unclear. Claim 68 has been amended to delete "preparation" and recite a "hydrolyzed lactose", as suggested by the Examiner.

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IV. Rejections Under 37 U.S.C. §102

Claims 45, 51-53, 57-65, 71, and 73-75 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 6,596,333 to Vaghela et al., which is asserted to teach all of the limitations of independent claims 45 and 71.

Claims 45 and 71 have been amended to include the limitation of dependent claim 55 reciting that the claimed ice cream comprises at least 50% (w/w) monosaccharides, based on its sugar content, which the Examiner acknowledges is not taught by Vaghela. Thus, since Vaghela does not teach all of the limitations of amended independent claims 45 and 71, it does not anticipate these claims. Claims 51-53, 57-61, 63-65, and 73-75, being dependent on claims 1 or 71 and further defining the invention, are also not anticipated by Vaghela for at least the same reason.

V. Rejections Under 37 U.S.C. §103

Claims 46-50, 54-56, 66, 68-70, and 72 stand rejected under 35 U.S.C. §103(a) as being obvious over Vaghela in view of various other cited prior art as summarized in the table below.

Claims	Cited Prior Art
46-50 and 72	Vaghela in view of United States Patent No. 6,497,913 to Grey et al.
54 and 56	Vaghela in view of Applicants' Admitted Prior Art
55	Vaghela in view of Applicants' Admitted Prior Art in further view of United States Patent No. 6,352,734 to Martin, Jr. et al.
66	Vaghela in view of "The Dictionary of Food Ingredients" by Igoe et al.
68	Vaghela in view of the combination of Martin and United States Patent No. 2,738,279 to Stimpson et al. as evidenced by <u>Ice Cream</u> by Arbuckle.
69	Vaghela in view of United States Patent No. 5,586,689 to D'Amato
70	Vaghela in view of United States Patent No. 6,558,729 to Riviere et al.

Vaghela is asserted to teach all of the limitations of independent claims 45 and 71, while the additionally cited prior art is asserted to teach the additional limitations of the rejected claims that depend therefrom. As stated above, Vaghela does not teach all of the limitations of amended independent claims 45 and 71, specifically that the ice cream comprises at least 50%

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(w/w) monosaccharides based on its sugar content. The prior art, with the exception of Martin, is not asserted to teach or suggest this limitation and, in fact, none of this prior art teaches or suggests this limitation, nor does it motivate a person skilled in the art to select such a limitation. Thus, the cited prior art, with the exception of Martin, taken alone or in combination, does not render independent claims 45 and 71 obvious.

The Examiner asserts that Vaghela in view of the Applicants' Admitted Prior Art in combination with Martin renders obvious the limitation of claim 55, which has now been added to independent claims 45 and 72.

Martin discloses a frozen dairy product comprising, in terms of sugar content, 5-10 wt.% sucrose, 2-8 wt.% corn syrup having a DE of about 36, 4-12 wt.% dextrose, and 0-1.5 wt.% starch (col. 3 lines 57-67). From these numbers, the Examiner has calculated that the monosaccharide content is 33-66 wt.%, and concluded that the disclosed range overlaps the claimed range of at least 50 wt.% monosaccharides. The Examiner concludes that a person skilled in the art would have found it obvious to combine this teaching from Martin with the teaching from Vaghela to arrive at the claimed composition being motivated by a desire to form a product with desirable sweetness, texture, and air stabilization. Applicants respectfully disagree.

A person skilled in the art would find no incentive in Martin to increase the monosaccharide levels in Vaghela to at least 50 wt.% while also increasing the unsaturated emulsifier content above the 0.2% upper limit taught by Vaghela. It is only with the benefit of hindsight that the skilled person would consider a predominant monosaccharide content and the claimed specific choice of an unsaturated emulsifier in an increased amount. The combination of high monosaccharides and unsaturated emulsifier provides an ice cream having a lower freezing point and improved air cell stabilization over longer periods (page 2, line 1 to page 3, line 21 and page 9, lines 4-5 of the original application). In order to improve the texture of the ice cream, it is desired to reduce the ice crystals present after freezing by lowering the freezing point. However, when the freezing point is lowered, the ice cream generally has reduced air cell stability. High amounts of stabilizers may counteract this effect but result in a gummy, rubbery, chewy ice cream. By manufacturing an ice cream having a predominant monosaccharide content

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and the claimed specific choice of an unsaturated emulsifier, the freezing point may be lowered improving the texture while maintaining good air cell stability without the excessive addition of stabilizers giving the ice cream a gummy, rubbery, chewy feel. This is illustrated by the examples in the present application as shown below:

Example	Monosaccharides (wt.%)	Unsaturated Emulsifier (wt.%)	Characteristics of Ice Cream
A	73	0.1	Coarsening of the air cells, harder to scoop, faster melting (page 14, line 32 to page 15, line 39)
B	73	0.2	No change in air cells, easy to scoop, slower melting (page 14, line 32 to page 15, line 39)
C	52	--	Gummy/rubbery texture, coarsening of air cells, poor taste (page 16, line 1 to page 17, line 3)
D	52	0.25	Creamy texture, no coarsening of air cells, good taste (page 16, line 1 to page 17, line 3)
E	--	--	Hard to scoop, icy/poor texture (page 17, line 5 to page 18, line 6)
F	62	0.35	Easy to scoop, creamy texture (page 17, line 5 to page 18, line 6)

In this table, the amounts of mono- and di-saccharides present in the included Espriion 400L whey product containing about 43% galactose and glucose were taken into account. Preparations B, D, and F fall within the scope of amended claims 45 and 71, while preparation C is a good representation of the disclosure of Martin. As can been seen in the table, the preparations having a low monosaccharide content and/or low unsaturated emulsifier contents did not have the desired texture and/or air stability.

Nothing in Vaghela and Martin, taken alone or in combination, teaches or suggests that a combination of a predominant monosaccharide content and the claimed specific choice of an unsaturated emulsifier in an increased amount would combine to lower the freezing point and improve texture, while simultaneously improving the air stability. Further, there is

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nothing in the cited prior art that teaches or suggests such a combination would have a freezing point of -3.5°C or lower, as recited in independent claims 45 and 71. Thus, there is no reason for a person skilled in the art to expect the resultant effect on texture, air stabilization, and freezing point and, therefore, no motivation for a person skilled in the art to combine the teachings of Vaghela and Martin absent hindsight based on the disclosure of the present application.

For these reasons, independent claims 45 and 71 are not rendered obvious by the teachings of Vaghela, Martin, and the Applicants' Admitted Prior Art. Claims 46-50, 54, 56, 66, and 68-70, being dependent on claims 45 or 71 and further defining the invention, are also non-obvious over the cited prior art for at least the same reasons.

VI. Conclusion

Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of claims 45-54, 56-61, and 63-75 are respectfully requested.

Respectfully submitted,
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